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AUTHOR Hassard, Jack
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ABSTRACT

A description is given of two Georgia alternative certification institutes and academic year internships for secondary foreign language, mathematics, and science teacher-interns and mentors. One program, the Teacher Recruitment and Internship Project for Success (TRIPS), is an intern-mentor alternative certification program designed to attract academically talented foreign language, mathematics, and science teachers to work in the urban educational environment. TRIPS interns, after being hired by the Atlanta Public Schools, were involved in a year-long internship under the direction of a mentor teacher and a college professor. They received summer training in curriculum, methods, and clinical teaching. Mentors received specialized training in communication skills and conferencing, observation and analysis of teaching, and evaluation, as well as research on supervision. In the second program, qualified applicants receive an internship experience under a trained mentor teacher without going through a traditional teacher education program. Candidates must hold a degree from an accredited college or university, have an overall grade point average of 2.5, pass the Teacher Certification Test, and complete a 1-year supervised classroom internship in the candidate's teaching field. Training in certain aspects of pedagogy is also provided. (JD)

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Alternative Certification of Secondary Foreign Language, Mathematics and Science Teachers

Jack Hassard
Georgia State University
Atlanta, Georgia

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Abstract

This paper describes the nature and results of two alternative certification institutes and academic year internships for secondary foreign language, mathematics and science teacher-interns and mentors.

Alternative Certification of Secondary Foreign Language, Mathematics and Science Teachers

Jack Hassard

Georgia State University

Atlanta, Georgia

USA

Over the past several years there has been a growing concern about the shortages of qualified foreign language, mathematics and science teachers in the United States. According to recent national reports as many as 15,127 teachers of mathematics, science and foreign language are teaching out-of-field and over a half million students in 29 states are being taught by teachers not certified to teach their subjects (Capper, 1988).

Acknowledging the increased demand for teachers, and the inability of traditional teacher education programs to meet this need, a number of alternative teacher training initiatives have been implemented. Graham (1989) reports that the number of states with alternative certification programs has increased rapidly. In 1984, only eight states offered some form of alternative certification; by 1986, only nine states did not have an alternative certification policy. One of these policies is the creation of programs to train nontraditional recruits for foreign language, mathematics and science teaching at the secondary school level.

Alternative certification is defined as any significant departure from the traditional undergraduate route through teacher education programs (Oliver and McKibbin, 1985). Under alternative certification programs individuals with a bachelor's degree in a subject area are permitted to teach in public schools without having completed a teacher education program.

In the State of Georgia, foreign language, mathematics and science have been identified as critical fields in which there is a shortage of certified teachers. According to

the Georgia Department of Education, over half of Georgia's science teachers are provisionally certified. In 1987, only one-quarter of the teachers who were hired in Georgia's schools were prepared in traditional teacher education programs. It has been predicted that this shortage of certified teachers will continue well into the foreseeable future. Some school districts, such as Atlanta, predict that over fifty percent of the current teaching force will retire by 1992. These, and other projections document a major teacher shortage in the state.

Faculty at Georgia State University have been involved in two alternative certification programs since 1986. One program, the Teacher Recruitment and Internship Project for Success (TRIPS), is a collaborative initiative involving the Atlanta Public Schools, Atlanta Federation of Teachers, Atlanta University, and Georgia State University in cooperation with the Georgia State Department of Education, the Office of the Mayor, and the American Federation of Teachers. The TRIPS program is an intern-mentor alternative certification program designed to attract academically talented foreign language, mathematics and science teachers to work in the urban educational environment. TRIPS interns, after being selected from a pool of recruits, and hired by the Atlanta Public Schools, received summer training in pedagogy (curriculum, methods and clinical teaching), and then were involved in a year long internship under the direction of a mentor teacher, and a college professor. Interns completed their course requirements during the academic internship year, or during the summer following the internship. TRIPS interns and mentors also participated in a week-long summer workshop based on the AFT Educational Research and Dissemination Program (American Federation of Teachers, 1986). Mentors received specialized training in communication skills and conferencing, observation and analysis of teaching, evaluation, and research on supervision (Jensen, 1988).

The second program that we have been involved in is the alternative certification program sponsored by the Georgia Department of Education. In 1987, the Georgia

Department of Education instituted a plan for alternative certification which established criteria for qualified applicants to receive pedagogical training and an internship experience under a trained mentor teacher without going through a traditional teacher education program at a college or university. Under this plan, school systems can train and provide a year long internship by following guidelines established in the document, "Alternative Certification Program for Critical Teaching Fields (Georgia Department of Education, 1987). According to the document criteria, candidates for alternative certification must hold a degree from an accredited college or university, have an overall grade point average of 2.5 on a four-point scale, pass the Teacher Certification Test, and complete a one-year supervised classroom internship in the candidates teaching field. Further, the alternative certification candidate must complete courses, or their equivalents in a) identification and education of children with special learning needs, b) curriculum, c) teaching methodology, and d) human growth and development.

Early in 1988, the Georgia Department of Education proposed to sponsor a summer institute to train 30 alternative certification candidates in foreign language, mathematics and science. The summer institute would provide the pedagogical training in the four areas identified above. Furthermore the institute plan included training of the mentors to prepare them for supervising the one-year internship for the alternative certification teachers. Faculty at Georgia State University planned, organized and carried out the 1988 summer institute, and were involved in directing alternative certification summer institutes in 1989 (Hassard and Jensen, 1988). This article focuses on the goals, organization and effectiveness of the alternative certification program that we developed, and the implications alternative certification programs have for the preparation of teachers. In the next section of the paper, a brief overview of alternative programs will be made, followed by a discussion of the alternative certification program at Georgia State University.

Characteristics of Alternative Certification Programs

In a study by the Rand Corporation, 64 nontraditional programs were surveyed to document the nature of the recruits, program content, effect on teacher supply and program viability (Darling-Hammond, Hudson, and Kirby, 1989). Nine programs were analyzed in depth, including two alternative certification programs, the Houston Independent School District Alternative Certification Program (ACP) and South Carolina Critical Needs Certification Program (CNCP). The ACP program has had over 150 graduates, mostly in fields other than mathematics and science, while the CNCP program has had 61 mathematics and 79 science teachers. Briefly here are some of the findings in the Rand study.

Recruitment Pools. When alternative certification programs were first proposed, it was believed that retirees and ex-military employees would make up a large number of recruits. According to the Rand report, alternative certification programs are attracting midcareer changers and new B.A.s. The researchers suggest that midcareer changers and new B.A.s may be the most sensitive to the financial and opportunity costs posed by traditional teacher education programs. In most alternative certification programs, the investment of time for education and training is minimized by AC policies. This is a very attractive feature of these programs.

Program Content. The specific content of alternative certification programs varies considerably. Most of these programs provide pedagogical coursework (lesson planning, classroom management, teaching methods) to supplement on-the-job experience required to obtain a teaching credential under state alternative certification standards. For example, in the South Carolina program, candidates participate in a two-week summer institute focusing on pedagogical principles and methodological skills, followed by a year long internship as a full-time teacher. During this phase, the teachers participate in eight monthly seminars on teaching methods and classroom management. The program continues with a second two-week summer institute following the first year of teaching. In last phase, candidates must complete three additional graduate courses within three years of

the issuance of the conditional teaching certificate (Hammond-Darling, Hudson, Kirby, 1989). The Rand study reported that most programs ranged from three to four courses in addition to a supervised internship.

Program Costs and Time. One of the attractions of the alternative certification programs is that they generally include a full-time, fully paid teaching internship following a brief summer training program, ranging in length from two to eight weeks. For example, in the Georgia State University alternative certification program, interns can complete their coursework in one summer, followed by a year long internship. Program costs vary considerably. Many alternative certification programs are funded by a third party. The GSU Program is funded by the Georgia Department of Education. Funding sources include state departments, school districts, the federal government and foundation grants. As pointed out by Darling-Hammond, Hudson and Kirby, this reliance on outside funding has made some programs quite vulnerable to funders' changing priorities.

Effecting Teacher Supply. The Rand study found that alternative certification programs represent a small fraction of the teachers needed in the United States. For example, it is estimated that over 20,000 new mathematics and science teachers will be needed each year over the next decade, yet Darling-Hammond, Hudson and Kirby estimate that alternative certification programs only supply about 10 percent of this requirement. AC programs are not a solution to the teacher supply problems, nor are they a threat to the integrity of traditional teacher education programs.

Program Viability. The Rand researchers, generalizing about factors affecting program viability, suggest that an alternative certification program's success is strongly affected by the state of local or regional labor markets. They point out that the alternative program in Houston discontinued mathematics and science training after the first year because there was a much greater need for elementary and bilingual teachers. The TRIPS program in Atlanta was discontinued because Atlanta's need for secondary mathematics and science teachers ceased, and a greater emphasis was placed on elementary and middle

school recruits. Successful programs appear to be ones that remain flexible in how they seek funding, in who they recruit and how they package their programs.

Alternative Certification in Georgia

The alternative certification program developed at Georgia State University was based on the model developed for the 1988 summer institute sponsored by the Georgia Department of Education (Hassard and Jensen, 1988). The institute coordinators devised a model in which objectives, activities and assessment were integrated into a holistic design. Instead of participating in four separate courses (curriculum, methods of teaching, human growth and development, and identifying exceptional children and youth), the alternative certification interns experienced a unified program in which the instructors of the institute collaborated and planned cooperatively all phases of the program. There were 23 interns representing seventeen school districts in the 1988 alternative certification institute. Eleven were in mathematics, six in science and six in foreign language. Each school district appointed a mentor teacher for each intern. The mentor was in the same certificated field, and in the same school as the intern. Mentors participated in one-week of training, while the interns had eight weeks of training. The interns were employed as full-time teachers during the 1988-1989 school year. The school districts agreed to support the efforts of the mentor-intern pairs throughout the school year, and further agreed to participate in an evaluation of the alternative certification program directed by faculty at Georgia State University and North Georgia College.

In an attempt to describe the effectiveness of the alternative certification program, a research study was carried out to compare attitudes of alternatively certified (AC) and regularly certified (RC) beginning teachers. Several studies emerged from this effort (Guyton, 1989). Fox (1989) investigated student-centered and directive attitudes of AC-teachers and RC-teachers. Student-centered attitudes were typified by an empathetic and progressive teacher---one who is concerned with the emotional development of students,

who promotes active and direct involvement of the students in the learning process. Directive attitudes were characterized by a more traditional approach to subject matter and teaching techniques such as maintenance of order and control in the classroom by close supervision. Fox found that by midyear AC and RC teachers exhibited comparable student centered and teacher centered attitudes. AC teachers entered teaching with lower teacher centered attitudes, but at the end of one semester, they were the same as regularly certified teachers. Fox also found that 80% of AC and 77% of RC teachers claimed to have positive attitudes toward students they teach. AC and RC teachers rated themselves similarly in their confidence in teaching ability. However, more AC than RC teachers reported they felt more effective in motivating students (73% vs 60%), were able to deal with individual student differences (80% vs 68%), and more likely to say major problems were not noted in planning lessons (87% vs 72%), class management (68% vs 52%) or student behavior (60% vs 48%) (Fox, 1989).

Fox concluded that the Georgia alternative certification program is producing teachers whose teaching attitudes parallel those of teachers who received certification through traditional programs. Fox also concluded that:

> In addition, these AC teachers display confidence in their teaching abilities, a positive attitude toward their students, and look favorably on their teacher training and induction program. The support received in the induction portion of the program, both from the mentor and the administration, has a positive effect on teacher attitudes. New teachers said that they received help in these areas of improving classroom management, handling discipline problems, dealing with the myriad of paperwork encountered in the profession, learning how to work with individual differences, and using a variety of instructional techniques. Mentors also serve as someone to listen when the new teacher just needs to talk, as a source of encouragement when needed, and as a sounding-board for trying out new ideas. This component emerges as a

critical element in the feeling of success and the effect on attitudes during the first year of teaching (Fox, 1989, pp. 100-101).

In a study of the beginning teachers personal and professional sense of efficacy (belief in their own abilities to bring about positive student learning), Sisk (1989) found there was no difference between the populations of AC teachers and RC teachers in the Georgia study. Sisk pointed out that this refuted the accusations that alternative certification programs recruit skilled functionaries and retreads from other professions. The teachers in the Georgia alternative certification program showed a sense of efficacy no different than traditionally prepared beginning teachers.

Based on the success of the 1988 summer institute, the Georgia Department of Education sponsored alternative certification summer institutes in 1989 at three institutions in Georgia: Georgia State University, North Georgia College and Georgia Southern College.

The GSU Alternative Certification Program (GSUACP)

The curriculum of the GSU institute was based on a design which integrated three themes---pedagogy, the nature of the student and the process of teaching. The curriculum was planned and implemented holistically by a staff of four GSU professors, a high school foreign language teacher, and several consultants (classroom teachers, supervisors, professors as guest speakers). Based on the objectives and curriculum content of the Alternative Certification Program for Critical Teaching Fields (Georgia Department of Education, 1987), the director and staff designed a six-week instructional program that integrated the content of four courses, rather than presenting them separately. Throughout the summer, the interns participated in a variety of teacher training activities---reflective teaching, microteaching, peer teaching coupled with mentor supervision---designed to help integrate the content from methods, curriculum, special education and human growth and development.

Twenty four interns participated in the program. They were selected from a pool of 67 applicants. Applicants who were currently teaching in the public schools with a nonrenewable teaching certificate in foreign language, mathematics or science were accepted without being interviewed by the summer institute faculty. Fifty-six applicants were interviewed for the remaining positions. Of the 24 interns recruited into the program, 12 were recent graduates with a B.A., and 11 were midcareer changers. None were retirees, or ex-military employees. There were ten mathematics interns, seven foreign language, and seven science. By the end of the summer, 22 of the interns had full-time teaching positions in seven school systems in Georgia, most of them in the Metro-Atlanta area. Following is a brief description of the institute, the intern and mentor training, and the academic year internship and seminar program.

Philosophy and Goals

The philosophy of the GSU alternative certification program was based on reflective teaching, inquiry teaching and experiential learning. Reflective teaching is a philosophy based on Dewey's (1938) notion that contemplation and reflective thought are important aspects of professional practice. Throughout the summer institute thinking reflectively about teaching was encouraged and reinforced, especially during the reflective teaching training sessions. The notion of inquiry crosses all the disciplines. It is a way of finding out about the world. It is a way of stimulating curiosity, not only among teacher-inters, but secondary students as well. It is a philosophy of exploration, and one in which the teacher and learner use problem solving means to experience their world. Another philosophical position taken by the institute staff was that instruction in the institute should be experientially based. It was felt that the interns should be actively involved in the learning process, and that the methods used in the institute should reflect the methods deemed important to secondary school teaching. Interns experienced in this training environment a wide range of teaching roles including preparing lessons, assembling and making instructional teaching materials and aids, and presenting and evaluating lessons.

The instructional program was based on the following ideas about teaching: 1) teaching is fundamentally based on relationships and connections among teachers and students; 2) teachers should create environments in which students are encouraged to be active learners, thereby supporting a student-centered orientation to teaching; and 3) that using a variety of instructional methodologies will benefit a wide range of students and their myriad abilities and talents. Thus, throughout the summer, communication, engagement in learning and variety in learning approaches were emphasized in lesson plans and activities with the interns.

The fundamental goal of the summer institute was to provide a practical approach to the training of beginning secondary foreign language, mathematics and science teachers to get them ready for the induction phase of certification during which they would be engaged in a full time internship in a public school. The content that was emphasized included curriculum, methods of teaching foreign language, mathematics and science, human growth and development and characteristics of exceptional children and youth.

Modeling

One assumption the staff made concerning the nature of instruction in the summer institute was that the interns on-the-job-performance could be enhanced if they witnessed and participated in examples of effective teaching and learning. Modeling examples of effective instruction was an essential characteristic of the instructors in the institute. Instead of lectures on "cooperative learning," interns experienced cooperative learning activities, and later were encouraged to incorporate these teaching strategies into the lessons they taught throughout the summer. Borich (1988) identified key and catalytic behaviors that contributed to effective teaching. These ten teacher behaviors included: clarity, variety, task orientation, engagement in the learning process, mo[illegible] rate-to-high success rate, use of student ideas, advanced organizers, questioning, probing and enthusiasm. During the internship year, these effective teaching behaviors were revisited as topics for the monthly seminars.

Program Curriculum

The content of the alternative certification program was divided into a summer institute component of six weeks of intensive pedagogical coursework, followed by a full time teaching position and one-year internship under the supervision of a mentor teacher in the same school as the intern. During the internship period interns and mentors met monthly at GSU for a series of teaching seminars.

Summer Institute. During the summer institute participants received credit for four courses in the GSU College of Education, as follows: Curriculum for Secondary Education, Methods and Materials of Foreign Language, Mathematics or Science (Department of Curriculum and Instruction), Human Growth and Development (Department of Educational Foundations), and Exceptional Children and Youth (Department of Special Education). The summer institute met daily from 8:30 A.M - 4:00 P.M. for six weeks.

Holistic Plan. Each week was organized around a theme in order to help the interns integrate the various aspects of the curriculum. These themes were as follows:

Week 1--Getting Started: Interns were immediately put into small groups to explore what they thought is an effective teacher. They were introduced to research on effective teaching, the reflective teaching model, microcomputers, and the initial elements of teaching in the content areas.

Week 2---Reflective Teaching: Each intern presented a reflective teaching lesson to a small group of peers, visited a middle school in the metro-Atlanta area, became a member of a group to begin a small-group study on the psychology of adolescence which would be presented later in the summer, and were introduced to the direct instruction model.

Week 3--Focusing on Learners and Learning: This shortened week focused on strategies to help students in secondary classrooms learn; interns were involved in a workshop on teaching strategies and techniques in multi-cultural environments, indirect instructional strategies, and were introduced to the microteaching model.

Week 4--Models of Teaching: Interns continued their investigation of indirect methods of teaching, and were introduced to cooperative learning strategies; a video series on classroom management was shown(Battista, 1984), and each intern participated in a microteaching session.

Week 5--Learning from Teaching: Interns continued their study of classroom management and multi-cultural education, but began shifting their focus to peer teaching sessions which began this week and would continue into the next week.

Week 6--Learning from each other--interns and mentors: Interns and mentors met in a residential training session on the campus of North Georgia College in conjunction with their alternative certification institute; each GSU intern presented a 30-minute lesson to a group of about 15 peers ; a mentor was assigned to each intern to carry out a pre- and post-teaching conference; special seminars were held to help interns prepare for the fall; these included experiences of first year interns and mentors from the 1988 alternative certification institute, special curriculum sessions meeting with the state coordinators of science, mathematics and foreign language, and a principal speaking on the nature of a school of excellence.

Conceptual Themes. Three conceptual themes---pedagogy, the nature of students, and the process of teaching---were identified to organize the content of the summer institute.

The pedagogical theme included classroom management and communication, organizing the curriculum, delivering instruction (methods of teaching foreign language, mathematics and science), evaluating students' knowledge and skills and microcomputer technology. The objectives for the pedagogical themes were based on the course guide for curriculum and methods developed for alternative certification programs (Georgia Department of Education, 1987), the Educational Research and Dissemination Program (AFT, 1987), the current literature and practice on effective teaching, and recent trends in the teaching of foreign language, mathematics and science. Interns were asked to develop a

five-day mini-unit based on a model of curriculum and instructional planning in their subject area. The unit included a rationale, five lessons, pre- and post-tests, as well as quizes, handouts, worksheets, laboratory activities, visuals, and a listing of media materials. They were also required to keep a "holistic-reflective log" in which they made daily entries synthesizing what they learned about teaching as a result of their experiences in the institute each day. The log was to reinforce a reflective, inquiry-oriented model of secondary education. In addition to specific methods books in the content areas, interns worked with two texts: Effective Teaching Methods (Borich, 1988), and Classroom Management for Secondary Teachers (Emmer, et.al., 1989).

The nature of the student theme included a study of exceptional children and youth, and an exploration of adolescent human growth and development. Two specialists, one from the Department of Special Education, and the other from the Department of Educational Foundations worked with the institute interns in these areas. In order to model an important instructional strategy for secondary student, interns were organized into small group cooperative teams. Each team investigated one area of adolescent human growth and development (physical, personality, social, cognitive, moral, sexual development). Team members were responsible for working together as a cooperative group in order to plan and carry out an experiential presentation to the entire group later in the summer institute. Teams were encouraged to plan creative presentations as opposed to lecture sessions. The activities were varied, ranging from role playing and psychodrama to video tape interviews with students.

The process of teaching theme included reflective teaching, microteaching and peer teaching. In each of these laboratory teacher training activities, participants presented lessons in order learn how to think reflectively about teaching, evaluate teaching episodes, test out curriculum and instructional ideas, and learn from teaching.

Reflective teaching (Phi Delta Kappa, 1987) is a laboratory model, developed at the Ohio State University. It is a form of peer teaching in which interns experience the

complete act of teaching: planning, execution and evaluation. It develops skills and processes enabling the interns to critique and reflect on the process of teaching. The lessons interns taught were selected from the Phi Delta Kappa published reflective teaching materials. The lessons (in the affective, cognitive and psychomotor domains) contain background information, objectives, materials needed, and special conditions and notes on ending the lesson. Each intern taught one reflective teaching lesson to a group of four or five peers. The class was divided into five groups; in each group the same reflective teaching lesson was presented by a designated teacher. These fifteen minute lessons were conducted over a period of several days, with no more than two rounds being conducted at a session. At the conclusion of the lesson, designated teachers conducted a brief reflective teaching discussion in their small group. These sessions focused on helping the designated teacher reflect on the lesson, and obtain feedback from the learners. The whole group convened for a large group reflective teaching session during which each designated teacher explained the method used to teach the same lesson. The whole group was able to compare and contrast different teaching styles and methods to teach the same objective. Interns in the 1988 and 1989 institutes rated highly reflective teaching, and wished they could have taught more than one reflective teaching lesson.

In microteaching, specific "technical" skills of teaching are practiced with a small group of pupils, who may be peers (Allen and Ryan, 1969). Interns presented a five minute lesson in order to demonstrate a skill of teaching. The microteaching skills that were selected correlated with the direct instruction model developed by Rosenshine (1983). In microteaching, unlike reflective teaching, the teaching session was videotaped, and played back for feedback and discussion purposes. Interns were divided into small teams, each being assigned one of the following microteaching skills: varying the stimulus situation, instructional set, illustration and use of examples, questioning, reinforcement, and closure. Each team selected an intern to present a content lesson focusing on one microteaching skill. Thus, one intern presented a French lesson that illustrated the use of

questioning, another lesson in science focused on illustration and use of examples, and a mathematics lesson demonstrated the use of instructional set. At the end of each microteaching presentation, the instructor facilitated a feedback session that focused on the strengths of the lesson, and how the lesson might be changed for re-teaching. The lesson was taught again (to a new group of students), incorporating changes suggested during the post-teaching discussion.

Peer teaching was used at the end of the institute to give each intern an opportunity to teach a lesson to peers that approximated in terms of time, planning and materials what it would be like in a secondary classroom. Each intern presented a 30-minute lesson which was video taped. Prior to the lesson, the intern met with a mentor teacher in a pre-teaching conference. During this conference, the intern went over the lesson plan, and explained what was the main objective of the lesson. The mentor observed the lesson as it was taught, and then met with the intern to review the video tape and the lesson.

Mentor Training. Mentoring is an integral part of the alternative certification program at GSU. A mentor was identified by the school system for each intern. Because only eleven interns had teaching positions by the fourth week of the institute, only eleven mentors participated in the two weeks of summer institute mentor training. As noted earlier, by the end of the summer 22 of the interns had teaching positions. A special training session was held for the mentors who were not able to participate in the summer training.

During week one of their training, the mentors met separately for five intensive days that focused on responsibilities for assessing the interns, being a mentor, observation and evaluation skills, conferencing and communication skills and structuring the mentor-intern experience. During week two of the mentor training, which held in a residential setting at North Georgia College, the mentors worked directly with interns on the planning and execution of their peer teaching lessons. During this week the mentors took an active role in helping establish the nature of intern-mentor relationships, and by their example

showed the interns the value of the helping relationship that would develop during the first year of teaching.

Internship and Seminar Program.

Following the summer institute each intern was involved in a full time teaching position and participated in one year internship under the supervision of a mentor teacher. The interns earned 15 hours of either college credit at Georgia State University, or staff development credit through the Georgia Department of Education. In either case, each intern and mentor participated in a series of seminars held at Georgia State University.

The purpose of the internship is to give the intern a full-year of teaching experience in a supervised setting. The helping relationship of the mentor is the key to successful first year of teaching. According to Fox (1989), the induction component of alternative certification programs which provides both mentor and administrative support is seen as a crucial factor in assisting the beginning teacher during the first year on the job. Research on the mentoring process suggests a number of roles for the mentor. Anderson and Shannon (1988) outline five roles that were incorporated into the internship: 1) the process of nurturing, 2) the act of serving as a role model, 3) five mentoring functions (teaching, sponsoring, encouraging, counseling, and befriending), 4) the focus on professional and/or personal development, and 5) the ongoing caring relationship.

The key to the internship program is one of support for the intern generated by the mentor with the support of the principal of the school. Coupled with the link to GSU on a monthly basis, the intern is in a position to raise questions about practice, seek help to solve problems as they arise, and not feel isolated during this crucial period of induction. Mentor teachers are there to provide daily support, and evaluate the progress of the intern. The mentors' goal is to facilitate and to help the intern develop and enhance: 1) competence---to master knowledge, skills, and applications which effective teaching requires; 2) self-confidence---to believe in one's ability to make good decisions, to be responsible and to be in control; 3) self-direction---to have the assurance and ability to take charge of one's

personal, professional, and career development; 4) professionalism---to understand and assume the responsibilities and ethics of the profession (Georgia Department of Education (1988).

During the internship period, interns and mentors participated in a year long seminar program at Georgia State University. The monthly seminars were designed to provide time for monthly debriefings, and for the presentation of a topic that was related to on-the-job practice. The following topics were planned by a team of mentors working with the institute director:

Seminar	Topic
October	Discussion of Intern Video Tapes of their Classroom Teaching
November	Classroom management: Assertive Discipline
December	Classroom management: Teacher Effectiveness and Student Achievement (TESA)
January	Cooperative Learning
February	Direct Instruction
March	Student Learning Styles
April	High Level Thinking
May	Affective Education

At the end of the internship period the interns will have completed the coursework and internship thereby making them eligible for a nonrenewable teaching certificate. According to Georgia certification guidelines, teachers have three years to meet the criteria to receive a renewable teaching certificate. Within the next three years, the intern must prepare a teaching portfolio (a teaching unit in the intern's field comprised of seven lessons) and be assessed (according to criteria in the Teacher Performance Assessment Instruments---TPAI) by a team of evaluators (a Regional Assessment Center evaluator, a peer, and a building administrator) Each member of the evaluation team observes the teacher's classroom performance using the TPAI.

Program Effectiveness

Twenty-two of the twenty-four interns were able to get teaching positions by the end of the summer. One of the interns chose not to enter teaching at this time, and the other intern was hired in the fall quarter. In order to determ the effectiveness of the program, the institute staff obtained feedback at the end of each week, and at the end of the summer institute. A research study was also planned that was similar to the study conducted on the effectiveness of the 1988 summer institute program.

Student Feedback. At the end of each week we administered a feedback instrument which asked the interns to rate how satisfied they were with the institute that week, and to make comments about the strengths and weaknesses of the activities. Based on the feedback during weeks 1 - 4, 69% of the interns were very satisfied, 30% were satisfied, and on the third evaluation, one intern expressed dissatisfaction.

After the interns had completed a month of teaching, they were asked to describe their perceptions of the program given their brief period of classroom teaching. They were asked to comment on the program strengths, weaknesses, and recommendations they would make in light of their classroom experience. Comments regarding program strengths were generally very positive. One intern said, "The introduction to the new ideas in pedagogy, especially group learning techniques was important. There was an overall positive feeling among the interns toward one another." This intern also said "...I think the interns are less afraid to go to veteran teachers for advice than traditionally trained new teachers." Another intern felt the positive encouraging atmosphere, honesty about real issues facing teachers, strong academic demands for coursework, and concentration on the most important aspects of preparation for teachers were strengths. A practical strength expressed by one intern was they were able to complete the 20 hours of coursework in one intensive summer institute. This same intern reported that interns were encouraged to be creative, progressive and stimulating teachers.

The interns pointed out weaknesses in the program. One felt there was too much material presented with not enough time to digest and understand it. Another felt more time was needed on microteaching, and there was not enough emphasis placed on classroom management. Some interns realized that there was no substitute for being in a real school working with real students. They expressed a desire to spend more time in the schools during the summer institute. One intern felt the institute did not prepare them enough for all the paperwork they faced in September. Finally one of the interns said, "Nothing could prepare us for the realities of classroom management. Discipline is something that has to be learned on-the-job. Perhaps more ideas showing 'real life conditions' would have been a help."

Several recommendations were made concerning future institutes. In future institutes "more videos showing teachers dealing with behavior problems in the classroom should be included," one intern suggested. Another intern felt the institute should focus more time developing strategies for teaching mainstreamed exceptional children. Others felt more time should be spent on lesson planning. One intern said we should cut down on the assignments and concentrate more on teaching lessons. Another felt that future interns should be involved in a classroom management project, and should interview new teachers. Finally, several interns suggested that the institute make arrangements for interns to teach a few lessons to high school students during the summer.

The feedback from the interns was considered important for future planning, and in making adjustments to the program and the schedule. For example, early during the summer institute it was evident that the interns were spending too much time in "class" and felt they did not have enough time for collaboration or for individual reading and preparation. The schedule was adjusted to provide more time. Listening to the interns has been an important part of the work of the institute faculty.

Research on the Beginning Teacher. One major trend in teacher preparation is the attention that has been given to induction programs---programs that provide

assistance to beginning teachers. As Fox (1989) reported, "the mentoring component of induction programs has been cited as the most influential factor in reducing the downward slide in attitude experienced by many new teachers." Brown, Edington, Spencer and Tinafero (1989) compared the academic performance and classroom teaching performance of teachers who were either fully certified through traditional teacher education programs, were hired by school districts on an emergency permit to teach in areas of need outside their fields, or had completed the first year of the alternative certification program at the University of Texas at El Paso. They found on teachers classroom performance (based on observing each teacher in the study two times) no statistically significant difference across the three groups on the composite score of the Texas Teacher Appraisal System. These results suggest that first year ACP teachers performed as well as teachers prepared through traditional teacher education programs.

Three studies were conducted on the 1988 Alternative Certification Program (Fox, 1989, Sisk, 1989, Guyton, 1989). Fox (1989) concluded that the Georgia Alternative Certification Program is producing teachers whose teaching attitudes parallel those who received certification through traditional programs. Sisk (1989) found that AC-teachers and RC-teachers showed no differences with regard to personal teaching efficacy and teaching efficacy.

Interns and mentors have agreed to participate in a one-year study to help the project staff determine the effectiveness of the 1989 GSU Alternative Certification Program. A series of survey instruments have been administered paralleling the research instruments that were used in the 1988 Georgia Alternative Certification study (Guyton, 1989). At the beginning of the institute (June, 1989), the interns completed the following survey instruments: 1) a participant information form; 2) a survey gathering information on influences, attitudes and concerns about teaching; 3) the Teacher Efficacy Scale (Gibson, 1983); and 4) the Educational Attitudes Inventory (Bunting, 1984). This baseline data will be used to compare changes throughout the first year of teaching, especially with regard to

the interns sense of efficacy, and attitudinal changes with regard to student-centeredness vs teacher directedness. In order to measure these changes, the Teacher Efficacy Scale and the Educational Attitudes Inventory was administered after the institute (August), at the end of the Fall term, and at the end of the year.

The Future of Alternative Certification

Research results and experience have been encouraging with regard to the efficacy of alternative certification programs, not only in Georgia, but in other states as well. Plans are underway at GSU to "institutionalize" an alternative certification program for secondary foreign language, mathematics and science teachers. There are several reasons why this is an important idea.

Alternative certification programs are shaping and perhaps even contributing to the redesign of teacher education in the United States. The alternative certification programs that have been developed in the past few years such as the South Carolina Critical Needs Certification Program, Houston Independent School District Alternative Certification Program, and the Georgia State University Alternative Certification Program are three different models of teacher training. Results of initial research studies aimed at evaluating these programs' effectiveness have been encouraging. In each case, the model of alternative certification used in these separate institutions is preparing teachers who fare as well during their first year of teaching as those beginning their careers through a traditional program. But as new models on the teacher education scene they provide an impetus for reform, not only at the institutions that coordinate the alternative certification program, but at others institutions who might be willing to make changes. The alternative certification models need to be studied, and tested. Graduates of these programs should be followed through several years of teaching. Do they remain in the profession beyond five years? Do they still feel a strong sense of efficacy? What are their attitudes about teaching and students after five years?

Alternative certification has provided a viable option for many people to enter the teaching profession through an alternative route. The program has attracted people with strong academic backgrounds (BAs in either foreign language, mathematics or science). In fact, half of the 1989 GSU interns were recent B.A. graduates. The program has also attracted midcareer changers--people who have worked for a few years, usually as engineers, scientists or mathematicians in industry or government. Most of people in the GSU Alternative Certification Program report that they chose teaching at this time because they wanted an opportunity to work with young people, were very interested in their subject matter, and this was a way to communicate that interest and enthusiasm to others. Darling-Hammond, Hudson and Kirby (1989) reported that the single most important reason for entering teaching among alternative certification recruits was interest in subject matter. Following this reason was recruits' abilities were well suited to teaching, and this new profession would give them an opportunity to work with young people.

Recruits to alternative certification programs should be treated differently than students in undergraduate teacher education programs. These recruits come to the alternative program with a degree in an academic area (and in some cases with advanced degrees), often with prior work experience, but most importantly with very strong convictions and interests in entering the teaching profession. Sisk's study (1989) refuted the accusation that those who choose alternative certification routes are "simply trained functionaries and retreads from other occupations." She could find no difference in alternatively certified teachers from traditionally trained teachers on their sense of efficacy. One of the criticisms of alternative certification programs has been that interns do not need to take as many credit hours of course work as do their counterparts in traditional teacher education programs. Some critics charge that alternative programs are not as rigorous as traditional programs. Alternative certification programs provide many experiences that more than make up for any deficiencies in numbers of credit hours. Unlike traditional teacher education programs, alternative certification programs work with beginning teachers

through their first year of on-the-job teaching, and in some cases AC programs work with interns for three years. Many programs involve the interns and mentors in a seminar series, thereby providing opportunities for the beginning teachers to share their problems with each other, and gain insights from the experienced, mentor teachers. Alternative certification programs also involve mentors as teacher educators in-the-field, adding a component that traditional programs lack.

Alternative certification has provided an opportunity for college and university faculties of education to rethink the nature of teacher education, and begin to visualize and plan new approaches to teacher training. At GSU, the alternative certification is being considered as an institutionalized alternative program within the College of the Education. By institutionalizing the alternative certification program, potential recruits and school systems in the state will be assured of a program leading to certification. The shortage of teachers in secondary fields of foreign language, mathematics and science is predicted to extend into the future. By making it possible for highly qualified individuals to enter the teaching profession through an alternative route is a path whose time has come.

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Author: Dr. Jack Hassard
Georgia State University
University Plaza
Atlanta, Georgia 30303

Phones: 404/651-2518 (Business)
404/325-2622 (Home)

Biographical Sketch

Jack Hassard is Professor of Curriculum and Instruction at Georgia State University. He is Director of the Alternative Certification Institute at GSU, and also Director of the U.S./U.S.S.R. Global Thinking Curriculum Project. Dr. Hassard is a specialist in science education and teacher education. His publications include fifteen books and numerous articles. Dr. Hassard has been a professor at Georgia State University since 1969. He has been a visiting professor at Florida State University and the University of Vermont, and a visiting scholar at the Far West Laboratory for Educational Research.

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Macintosh SE (Micosoft Word---Disk enclosed)